

Information Form for SJTU Graduate Profession Courses

Basic Information																																		
* Course Name	Chinese																																	
	English Solidification Technology and New Materials																																	
* Credits	3	* Teaching Hours	48 1 =16																															
* Semester	Spring	* Cross-semester?	No	Spanning over Semesters																														
* Course Type	Program Elective Course	* Course Type	For full-time students																															
* Course Category	Specialized Course	Targeting Students	Doctoral Level																															
* Instruction Language	Chinese	Teaching Method	Online teaching																															
* Grade	Letter grading	Exam Method	Tests																															
* School	School of Materials Science and Engineering																																	
Subject	Materials Science and Engineering																																	
Person in charge	Name	ID	School	E-mail																														
				junwang@sjtu.edu.cn																														
Extended Information																																		
* () Course Description																																		
* English Course Description	<p>Objective: To understand, master and have the professional knowledge of exploring solidification technology and developing new materials</p> <p>Contents: solidification principle, development of representative solidification technology and development of new materials</p> <p>Prerequisite courses: solidification principle and material forming principle</p>																																	
* () Syllabus	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td style="width: 20%;"></td><td style="width: 60%;"></td><td style="width: 20%;"></td></tr> <tr><td>1</td><td></td><td>3</td></tr> <tr><td>2</td><td></td><td>9</td></tr> <tr><td>3</td><td></td><td>6</td></tr> <tr><td>4</td><td></td><td>3</td></tr> <tr><td>5</td><td></td><td>6</td></tr> <tr><td>6</td><td></td><td>3</td></tr> <tr><td>7</td><td></td><td>9</td></tr> <tr><td>8</td><td></td><td>6</td></tr> <tr><td>9</td><td></td><td>3</td></tr> </tbody> </table>							1		3	2		9	3		6	4		3	5		6	6		3	7		9	8		6	9		3
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* English Syllabus	Chapter	Content	Teaching Hours
	1	Introduction	3
	2	Metallic melt structure and treatment	9
	3	The forming mechanism and controlling of casting faults	6
	4	Semisolid casting	3
	5	Directional solidification	6
	6	Rapid solidification	3
	7	Solidifying under microgravity	9
	8	Solidifying under high pressure	6
	9	Solidification of MMCs	3
* Requirements			
* English Requirements	In class test, mid-term test and final test. It is required to read the relevant materials and supporting documents, master the basic principles, and be able to analyze and solve problems with the knowledge learned.		
* Resources	_____		
* English Resources	<u>solidification Technologies Methodology of Materialogy</u>		
Note			